

Virginia Department of Rail & Public Transportation

Revenue Estimation and Transit Resource Allocation Planning

*Revenue Advisory Board /
TSDAC Joint Meeting
April 28, 2017*



KEY QUESTIONS

→ How much funding?

- *Estimate State Transit Capital Assistance Needs*

→ What funding sources?

- *Examine Funding Options, including Revenue Estimation*

→ Which projects?

- *Develop Project Prioritization Approach*

→ How much for each project?

- *Developed Prioritized Funding Allocation Method*

REVENUE ESTIMATION

REVENUE ESTIMATION: KEY QUESTIONS

→ What revenues need to be raised?

- Address funds sunseting in FY19 and FY20
- Support reasonably-projected growth in capital investments

→ What are the different revenue options?

- How much do they raise?
- How can they be packaged?

→ How to allocate regionally-raised funds?

UPDATED PRINCIPLES FOR SELECTING REVENUE SOURCES

Based on Revenue Advisory Board feedback (*revisions highlighted*):

- 1. Focus on transit capital funding**
- 2. Pursue a package of multiple revenue sources**
- 3. Consider both statewide and regional sources (spent in region collected)**
- 4. Ramp up revenues gradually to address future needs**
- 5. Focus on revenue sources for which a rate increase is most feasible**
- 6. Prepare a range of options for General Assembly consideration**

UPDATED APPROACH TO DEFINE FUNDING PACKAGES

- **Separately address regional and statewide needs**
- **Adjust funding packages to reflect Capital Program Prioritization Methods:**
 - Allocate state funding to the best-ranking projects
 - Keep steady state participation rates throughout the period
 - Need for steady and growing revenue streams

ESTIMATION SUMMARY - STATE

State sources ranked by average annual revenue raised

State Sources	Existing State Tax Rate	Increased Tax Rate	Growth Rate	Average Annual Revenue Estimated
Retail Sales Tax	4.3% ¹	0.25%	1.03%	\$338.1m
Motor Vehicle Sales and Use Tax	4.15%	0.50%	1.05%	\$119.3m
Gas and Diesel Fuel Sales Tax	5.1%/6% ²	0.50%	0.89% ³	\$85.7m
Deed & Mortgage Recordation Tax	\$0.25/\$100 ⁴	\$0.05/\$100	0.50% ⁵	\$73.2m
Insurance Premium Tax	2.25%	0.25%	5.53%	\$70.0m
Priority Transportation Fund	-	Net Revenue after Debt Service	-	\$67.4m ⁶
Motor Vehicle License Fee	\$40.75	\$5.00	0.00%	\$36.7m
Internet Sales Tax	-	0.25%	6.07% ⁷	\$24.1m
Real Estate Transfer Tax	\$0.05/\$100 ⁸	\$0.01/\$100	0.50% ⁵	\$6.8m

1: 4.3% is the state rate, effective total rate is 5.3% statewide, and 6% in NoVA and Hampton Roads; tax rate is 2.5% statewide for food

2: 5.1% for gasoline; 6% for diesel state rate. Effective total rate 7.2%/8.1% in NoVA and Hampton Roads.

3: Growth rate from the state forecast on the gas tax. Base price from EIA.

4: Effective rate is \$0.33 /\$100 of deed and mortgage value for most jurisdictions (option of 1/3 additional local rate)

5: Conservative 0.5% growth used to replace negative observed CAGRs

6: Average for PTF is from FY25-27

7: Only 2014-2018 data available, CAGR based on that time series

8: Effective rate is \$0.10/\$100 of deed value (5 cents state rate, 5 cents local rate). Additional \$0.15/\$100 congestion relief fee in NoVA.

ESTIMATION SUMMARY - NORTHERN VIRGINIA

Northern Virginia sources ranked by average annual revenue raised

Northern Virginia Sources	Existing Regional Tax Rate	Increased Tax Rate	Growth Rate	Average Annual Revenue Estimated
Retail Sales and Use Tax – NoVA	0.7% ¹	0.50%	2.64%	\$204.4m
Retail Sales and Use Tax – WMATA Jurisdictions ²	0.7% ¹	0.50%	2.62% ²	\$169.5m
Fuel Sales Tax Increase after Floor Implementation	2.1%	1.2%	EIA Forecast	\$30.6m
Fuel Sales Tax Floor Implementation	2.1% ³	Floor	EIA Forecast	\$25.1m
Utility Bill Fees	-	\$12/yr	1.32%/1.66% ⁴	\$12.0m
Real Estate Transfer Tax	\$0.15/\$100 ⁵	\$0.02/\$100	0.83%	\$6.1m

1: Tax rates for retail sales tax are as follows:

- 0.7% is the NoVA Regional rate
- Effective rate statewide: 5.3%
- Effective rate in NoVA and Hampton Roads: 6%

2: Rate increase for WMATA jurisdictions only. Growth rate for WMATA jurisdictions is slightly lower than for NoVA as a whole.

3: 5.1% for gasoline; 6% for diesel state rate. Effective total rate 7.2%/8.1% in NoVA and Hampton Roads.

4: Residential Growth Rate/Commercial Growth rate

5: \$0.15/\$100 is NoVA Congestion Relief Fee, coupled with the statewide rate of \$0.10/\$100, the effective rate is \$0.25/\$100 in NoVA

ESTIMATION SUMMARY – HAMPTON ROADS

Hampton Roads sources ranked by average annual revenue raised

Hampton Roads Sources	Existing Regional Tax Rate	Increased Tax Rate	Growth Rate	Average Annual Revenue Estimated
Retail Sales and Use Tax	0.7% ^{1,2}	0.15%	1.03%	\$23.6m
Fuel Sales Tax Increase after Floor Implementation	2.1%	1.2%	EIA Forecast	\$21.1m
Fuel Sales Tax Floor Implementation	2.1% ³	Floor	EIA Forecast	\$17.3m
Utility Bill Fees	-	\$12/yr	0.5%/0.5%	\$6.5m
Real Estate Transfer Tax	-	\$0.02/\$100	1.00%	\$1.4m

1: Hampton Roads Transit provided revenue estimates for Retail Sales and Use Tax and Real Estate Transfer Tax.

2: Tax rates for retail sales tax are as follows:

- 0.7% is the Hampton Roads Regional rate
- Effective rate statewide: 5.3%
- Effective rate in NoVA and Hampton Roads: 6%
- Tax rate is 2.5% statewide for food

3: 5.1% for gasoline; 6% for diesel state rate. Effective total rate 7.2%/8.1% in NoVA and Hampton Roads.

ILLUSTRATIVE FUNDING PACKAGES

→ Package 1 – Increase Existing Statewide Revenues

- Increase current statewide rates for selected revenues sources
- Ramp up share of Priority Transportation Fund starting 2025

→ Package 2 – Single Source

- Increase current rates for a single source:
 - Retail Sales and Use Tax
 - Fuel Sales Tax

→ Package 3 – Increase Existing State & Regional Revenues

- Increase current rates for selected state and regional sources:
 - Northern Virginia
 - Hampton Roads
- Ramp up share of Priority Transportation Fund starting 2025

PACKAGE 1 – INCREASE EXISTING STATEWIDE REVENUES

→ Ramp up share of Priority Transportation Fund starting 2025

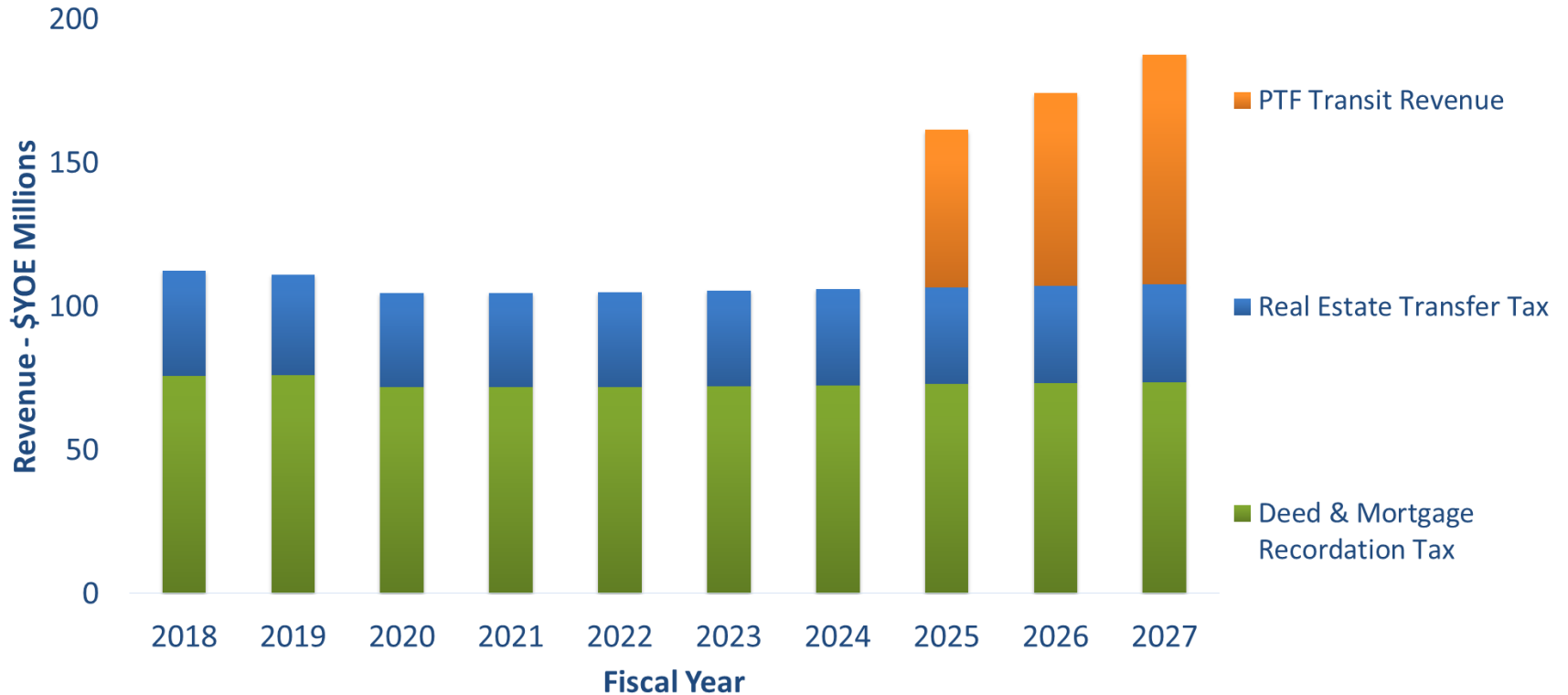
Source	Existing State Rate	Existing Transit Capital Share	Increase to State Rate	New Transit Capital Share	Average Annual Revenue Estimated*
Deed & Mortgage Recordation Tax	\$0.25/\$100	\$0.01/\$100	\$0.05/\$100	\$0.06/\$100	\$73.2m
Priority Transportation Fund	-	20-40% of 1/3 of revenues	-	Net Revenue after Debt Service	\$67.4m ¹
Real Estate Transfer Tax	\$0.05/\$100	-	\$0.05/\$100	\$0.05/\$100	\$33.8m
Average Annual Total Revenue Estimated	\$127.2m²				

1: Average for PTF is from FY25-27

2: Average Annual Total Revenue Estimated includes partial average from PTF (FY25-27)

*FY18-FY27. Estimates: WSP | Parsons Brinckerhoff

PACKAGE 1 – INCREASE EXISTING STATEWIDE REVENUES



Average Annual Revenue: \$127.2m

Average Annual Total Revenue Estimated includes partial average from PTF

PACKAGE 2 – SINGLE SOURCE

Source	Existing Rate	Existing Transit Capital Share	Increase to Rate	Average Annual Revenue Estimated*
Retail Sales and Use Tax (non-food only)	4.3% ¹	0.04%	0.14%	\$157.3m

-OR-

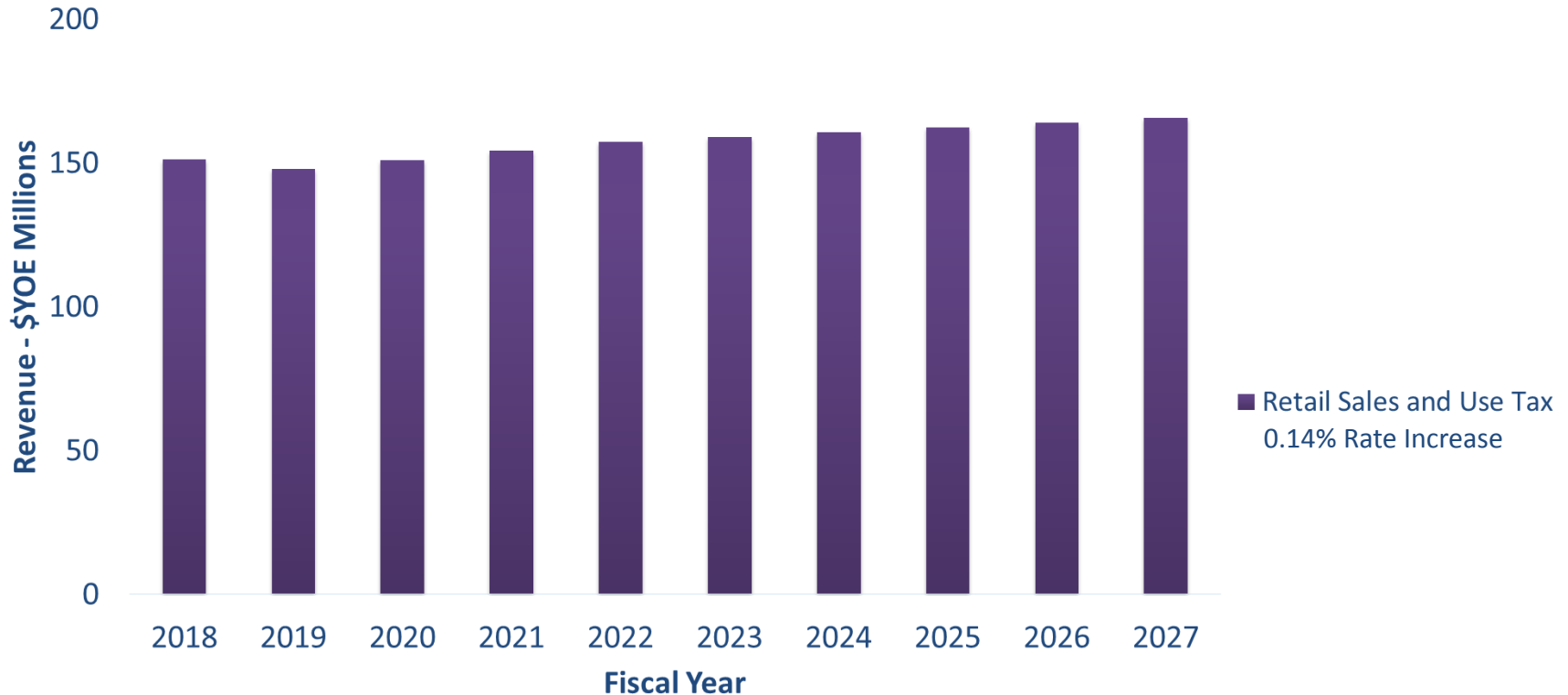
Source	Existing Rate	Existing Transit Capital Share	Increase to Rate	Average Annual Revenue Estimated*
Fuel Sales Tax	5.1%/6.0% ²	0.18%	0.9%	\$154.2m

1: 4.3% is the state rate, effective total rate is 5.3% statewide, and 6% in NoVA and Hampton Roads; tax rate is 2.5% statewide for food

2: 5.1% for gasoline; 6% for diesel state rate. Effective total rate 7.2%/8.1% in NoVA and Hampton Roads.

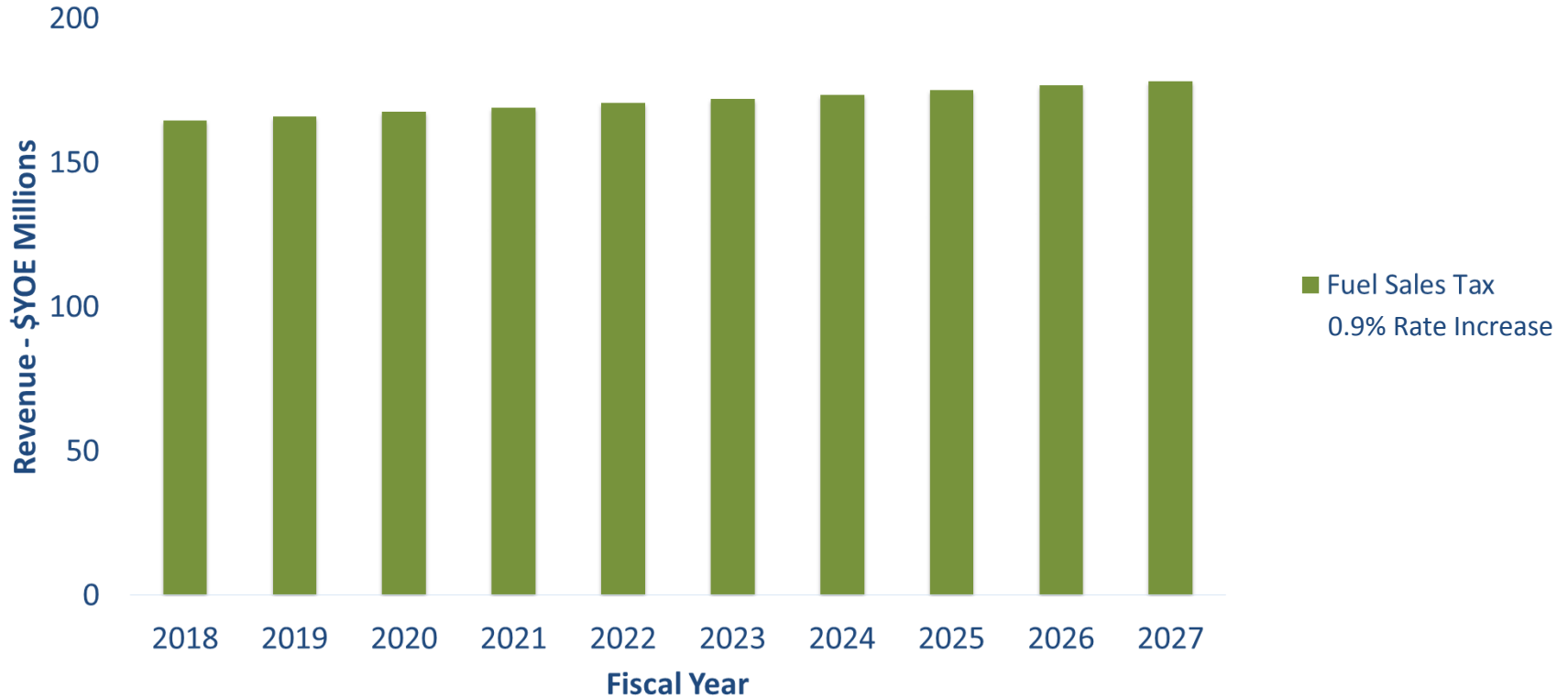
*FY18-FY27 Estimates: WSP | Parsons Brinckerhoff

PACKAGE 2 – RETAIL SALES TAX (NON-FOOD) ONLY



Average Annual Revenue: \$157.3m

PACKAGE 2 – FUEL SALES TAX ONLY



Average Annual Revenue: \$154.21m

PACKAGE 3 – INCREASE EXISTING STATE & REGIONAL REVENUES

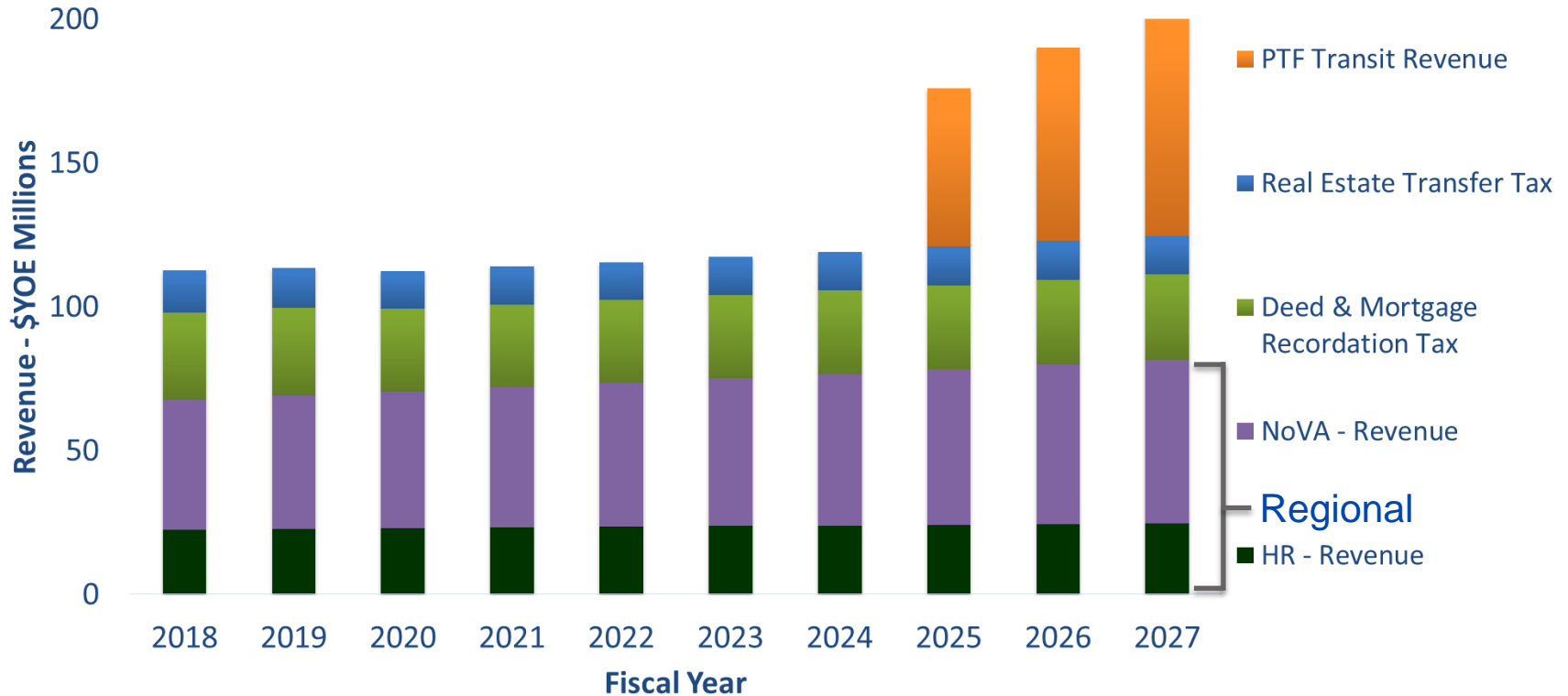
	Source	Existing Rate	Existing Transit Capital Share	Increase to Rate	New Transit Capital Share	Average Annual Revenue Estimated*
State	Deed and Mortgage Recordation Tax	\$0.25/\$100	\$0.01/\$100	\$0.02/\$100	\$0.03/\$100	\$29.3m
	Real Estate Transfer Tax	\$0.05/\$100	-	\$0.02/\$100	\$0.02/\$100	\$13.5m
	Priority Transportation Fund	-	20-40% of 1/3 of revenues	-	Net Revenue after Debt Svc.	\$67.4m ¹
	State Subtotal					\$63.0m²
Regional	NoVA	Multiple options: Discussion in next slide				~\$50m
	HR	Multiple options (Fuel Sales Tax, Retail Sales and Use Tax...)				~\$25m
	Regional Subtotal					~\$75m
	Total					\$138.0m²

1: Average for PTF is from FY25-27

2: Average Annual Total Revenue Estimated includes partial average from PTF

*FY18-FY27. Estimates: WSP | Parsons Brinckerhoff

PACKAGE 3 – INCREASE EXISTING STATE & REGIONAL REVENUES



Average Annual Revenue: \$138m

REGIONAL REVENUE OPTIONS: FUEL SALES TAX

→ Fuel Sales Tax in Northern Virginia and Hampton Roads:

- Floor to the Fuel Sales Tax; Enable Tax for Transit in Hampton Roads
- Floor Fuel Sales Tax + Fuel Sales Tax Rate Increase

Source	Existing Rate	Increase to Rate	Average Annual Revenue Estimated*
NoVA ¹ – Fuel Sales Tax Increase after Floor Implementation	2.1% ²	1.2%	\$30.6m
NoVA ¹ – Fuel Sales Tax Floor Implementation	2.1% ²	Floor	\$25.1m
NoVA¹ – Total			\$55.7m
HR – Fuel Sales Tax Increase after Floor Implementation	2.1% ²	1.2%	\$21.1m
HR - Fuel Sales Tax Floor Implementation	2.1% ²	Floor	\$17.3m
HR – Total			\$38.4m

1: NoVA: all Northern Virginia jurisdictions.

2: 5.1% for gasoline; 6% for diesel state rate. Effective total rate 7.2%/8.1% in NoVA and Hampton Roads.

*FY18-FY27. Estimates: WSP | Parsons Brinckerhoff

REGIONAL REVENUE OPTIONS: RETAIL SALES AND USE TAX

→ Retail Sales and Use Tax in Northern Virginia and Hampton Roads:

- Fund \$50m of NoVA transit capital needs
- Enable Tax for Transit in Hampton Roads to fund ~\$25m transit capital needs

Source	Existing Rate	Existing Transit Capital Share	Increase to Rate	Average Annual Revenue Estimated*
NoVA – WMATA Jurisdictions – Retail Sales and Use Tax	0.7% ¹	-	0.15%	\$50.9m
Hampton Roads – Retail Sales and Use Tax	0.7% ¹	-	0.15%	\$23.6m

1: 4.3% is the state rate, effective total rate is 5.3% statewide, and 6% in NoVA and Hampton Roads; tax rate is 2.5% statewide for food
 *FY18-FY27. Estimates: WSP | Parsons Brinckerhoff

REGIONAL REVENUE ALLOCATION FOR NORTHERN VIRGINIA

- **WMATA may require alternate funding allocation method**
 - WMATA capital programming is not driven by Virginia's funding allocation approach

- **Approaches:**
 - **Dedicated sales tax funding WMATA needs**
 - Estimated at \$500m across MD/DC/VA on average over the next 10 years
 - 0.5% sales tax in WMATA jurisdictions raises \$170m annually
 - **New regional sources raising \$50m**
 - Funds raised by sales tax and/or fuel sales tax

POTENTIAL REVENUE STRATEGIES

- **Transit Capital funding needs may be met through a number of approaches including:**
 - Increasing existing state rates
 - Increasing both state and regional rates

- **Regional revenue sources can be sized to specific needs, such as WMATA in NoVA**

- **Adding a floor to the regional Fuel Sales Tax could contribute to fund higher transit needs:**
 - In NoVA
 - Potentially in Hampton Roads, where Fuel Sales Tax revenues are currently dedicated to highways

TRANSIT RESOURCE ALLOCATION PLANNING

PRIORITIZED STATE CAPITAL FUNDING ALLOCATION: KEY QUESTIONS

- **How are state transit capital assistance funds allocated?**
 - Prioritize best projects

- **Key variables to consider:**
 - Funding Split between State of Good Repair (SGR) and Major Expansion
 - State Participation Rate

FUNDING ALLOCATION ANALYSIS

→ **Simulate what types of projects would be funded under different scenarios based on 3 variables:**

- Amount of Available State Revenue
- Funding Split between State of Good Repair (SGR), Minor Enhancements, and Major Expansion
- State Participation Rate

DATA

- **Actual SYIP and WMATA CIP project data**
- **Projected data beyond SYIP/CIP, similar to Transit Resources Allocation Plan Capital Projection presented in October**
- **Apply projected data to estimate spending by subtype**
 - Not all projects have information to be scored and ranked
 - Hence, simulation uses project subtypes to approximate expected results
 - Project subtypes were given an average score and ranking

FUNDING DECISIONS

- **Funding outcomes show project subtypes funded on an annual basis**
- **Subtypes funded in rank order by score, until funding exhausted by project type (SGR, Minor Enhancement, Major Expansion)**
- **Hence, subtypes may be:**
 - Fully funded
 - Partially funded (when subtype needs exceed leftover for a given type)
 - Not funded

STATE REVENUE

→ 2 State Revenue cases:

- **Base case:**

- Transit bonds sunset in FY19
- PRIIA sunset in FY20

- **Additional revenue case:**

- Sunset funds backfilled (equivalent revenues to transit bonds and PRIIA through FY27)
- 15% additional revenue from new revenue sources (\$20m annually)

FUNDING SPLIT

→ 3 Scenarios:

Scenario 1	Scenario 2	Scenario 3
80% SGR/Minor Enhancements 20% Major Expansions	90% SGR/Minor Enhancements 10% Major Expansions	100% SGR

→ All project types funded:

- SGR: 95%; Minor Enhancement: 5%
- Excess funds for Minor Enhancement and/or Major Expansion flow to SGR

STATE PARTICIPATION

- **State participation (or share) measured as percent of total project costs**
- **Illustrative case: Maximum 80% state participation for all projects and tiers**
- **Graphs demonstrate range of project value funded for other match rates (between 50% and 80%)**

SCENARIOS

Scenario 1	Scenario 2	Scenario 3
80% SGR/Minor Enhancements 20% Major Expansions	90% SGR/Minor Enhancements 10% Major Expansions	100% SGR

State Share: Maximum 80% State Participation Rate on Total Cost of Project

2 state revenue cases:

- **Base Case: PRIIA and Transit Capital Bonds sunset as scheduled**
- Additional Revenue: Sunset funds backfilled + 15% additional revenue (\$20m)

ILLUSTRATIVE SCENARIO – SCENARIO 2

→ Revenue

- Base Case:
 - Transit bonds sunset in FY19
 - PRIIA bonds sunset in FY20

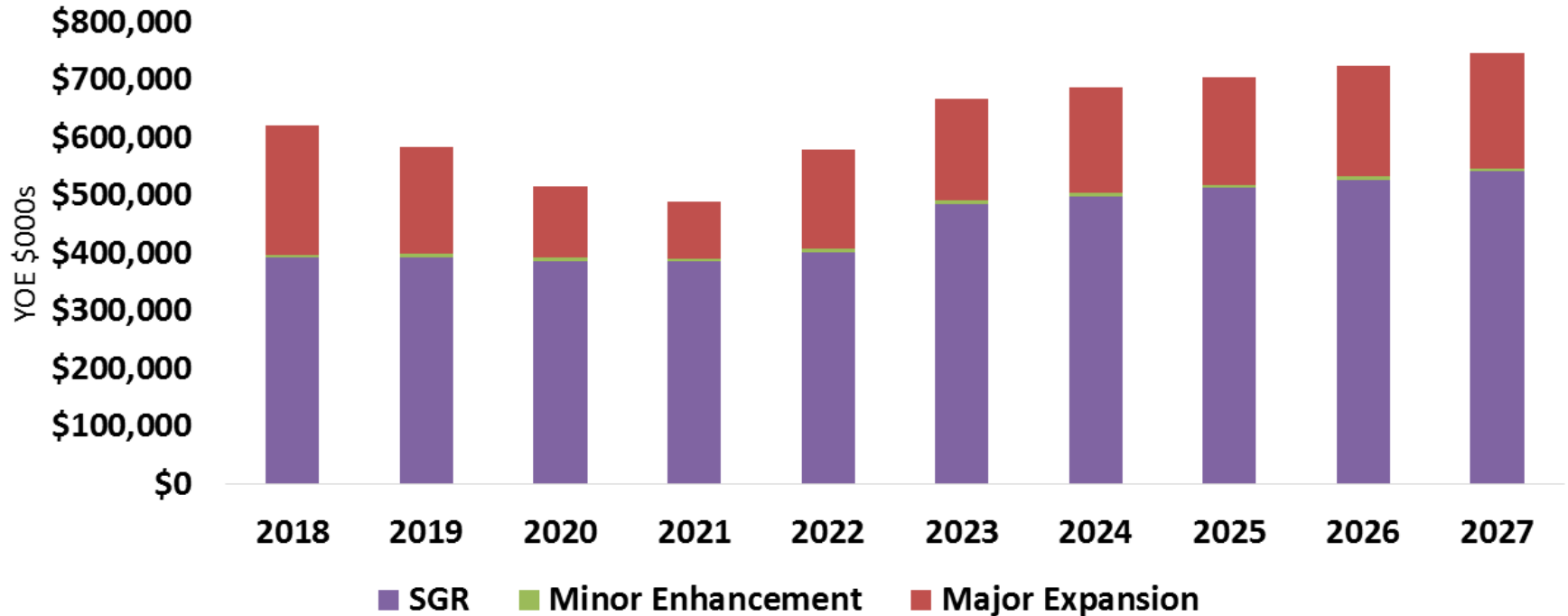
→ Funding Split

- 90% SGR and Minor Enhancement
- 10% Major Expansion

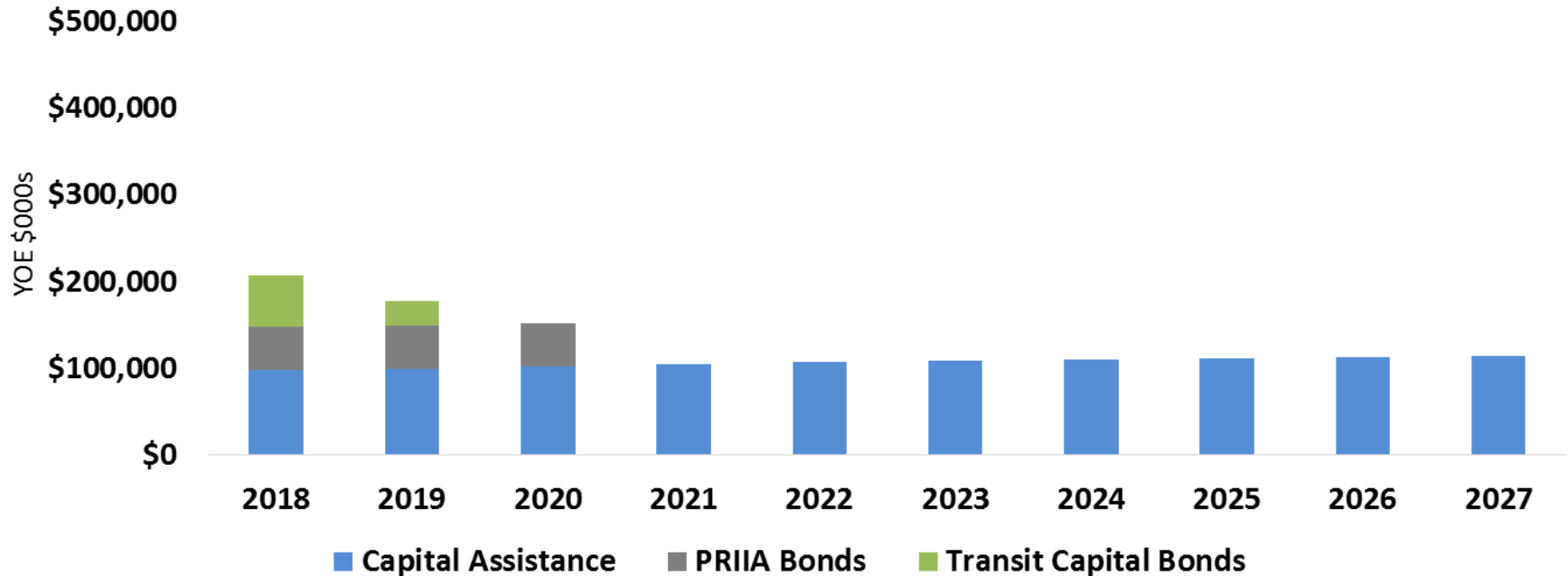
→ State Share

- 80% maximum for all tiers

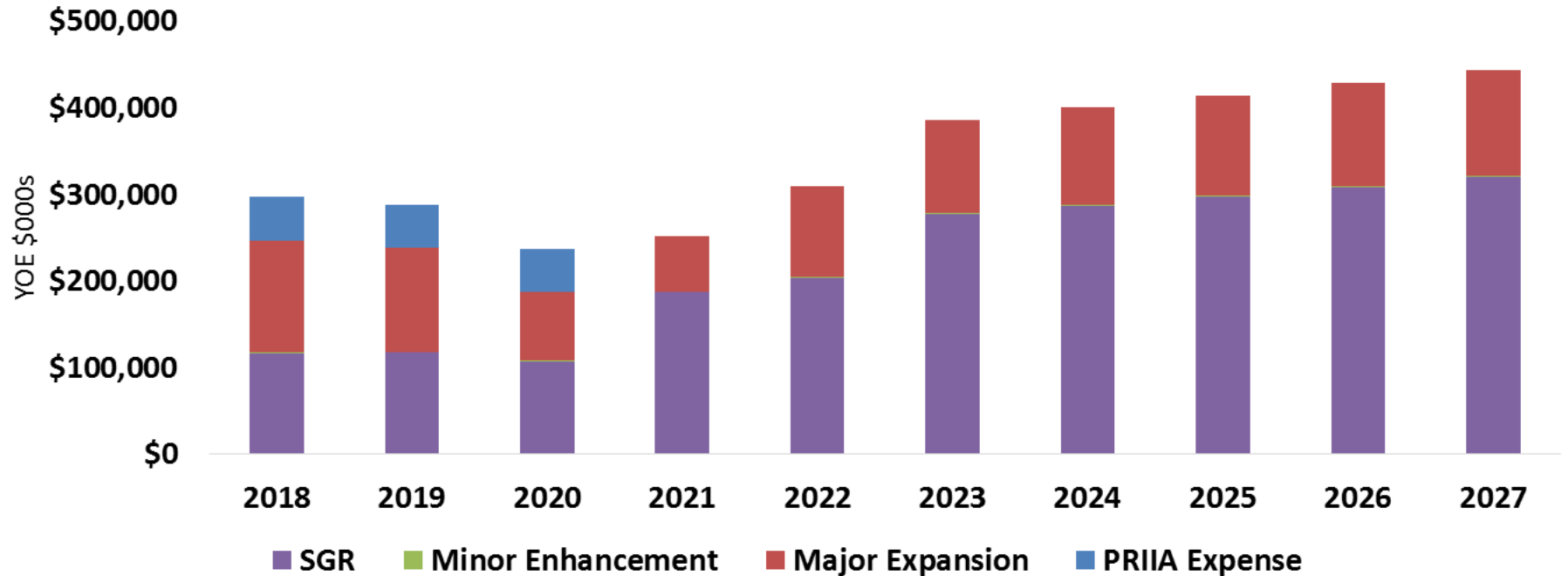
\$6.3B PROJECTED TRANSIT CAPITAL INVESTMENTS BY VIRGINIA TRANSIT AGENCIES (FY18-27)



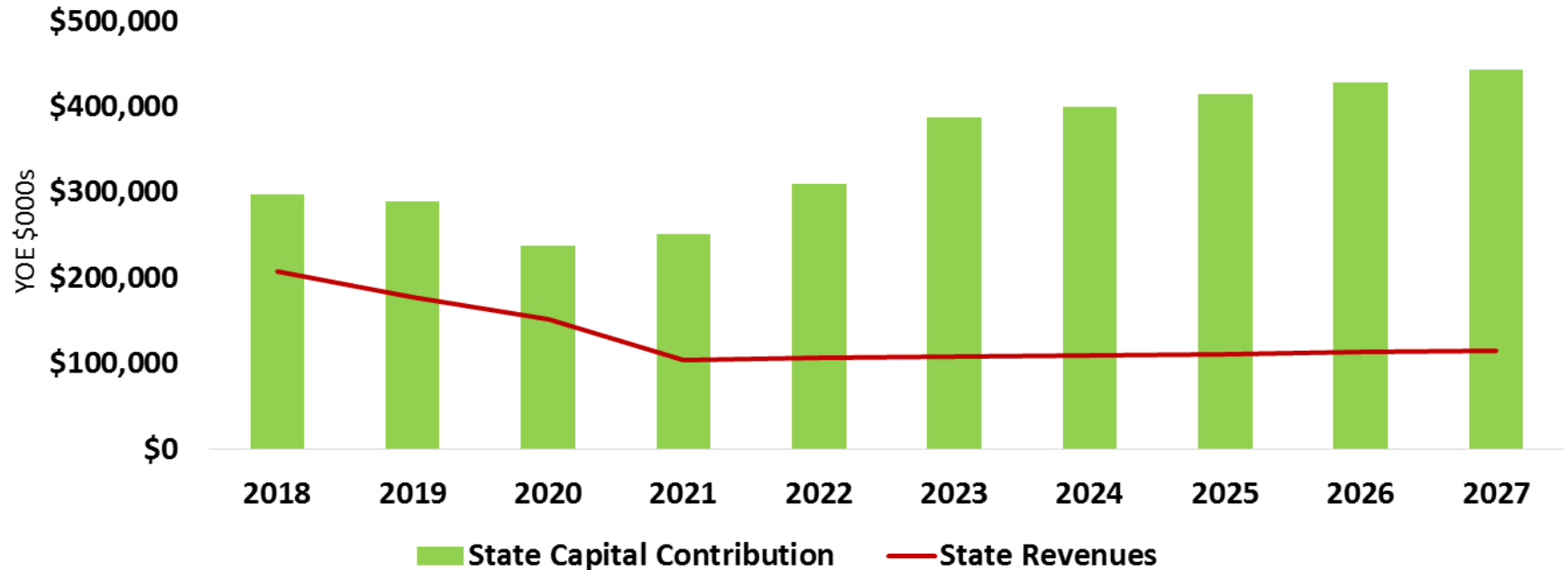
\$1.3B PROJECTED STATE TRANSIT CAPITAL REVENUES (FY18-27)



\$3.3B STATE TRANSIT CAPITAL FUNDING NEEDS (FY18-27)



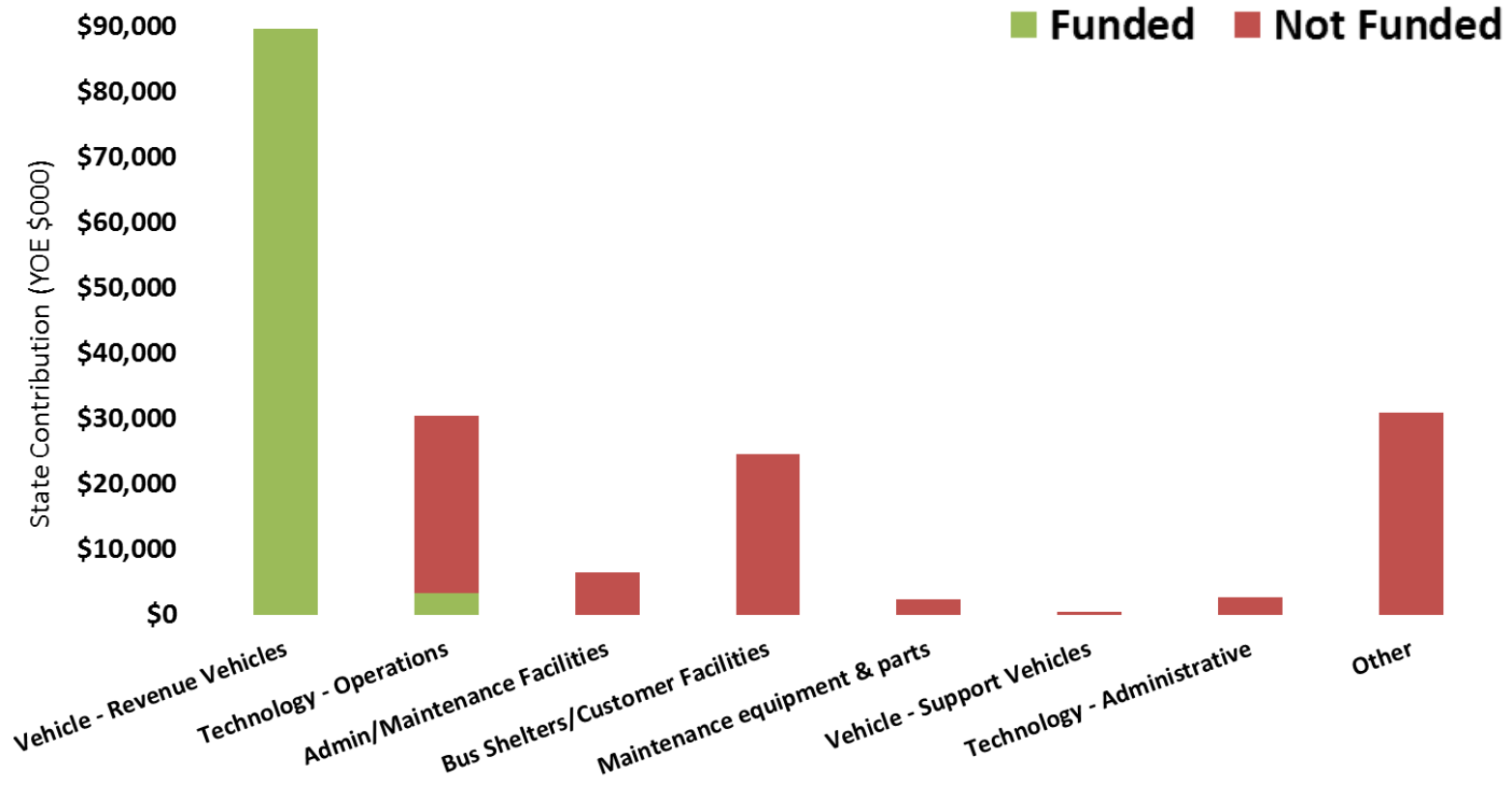
STATE TRANSIT CAPITAL FUNDING NEEDS AND PROJECTED REVENUES (FY18-27)



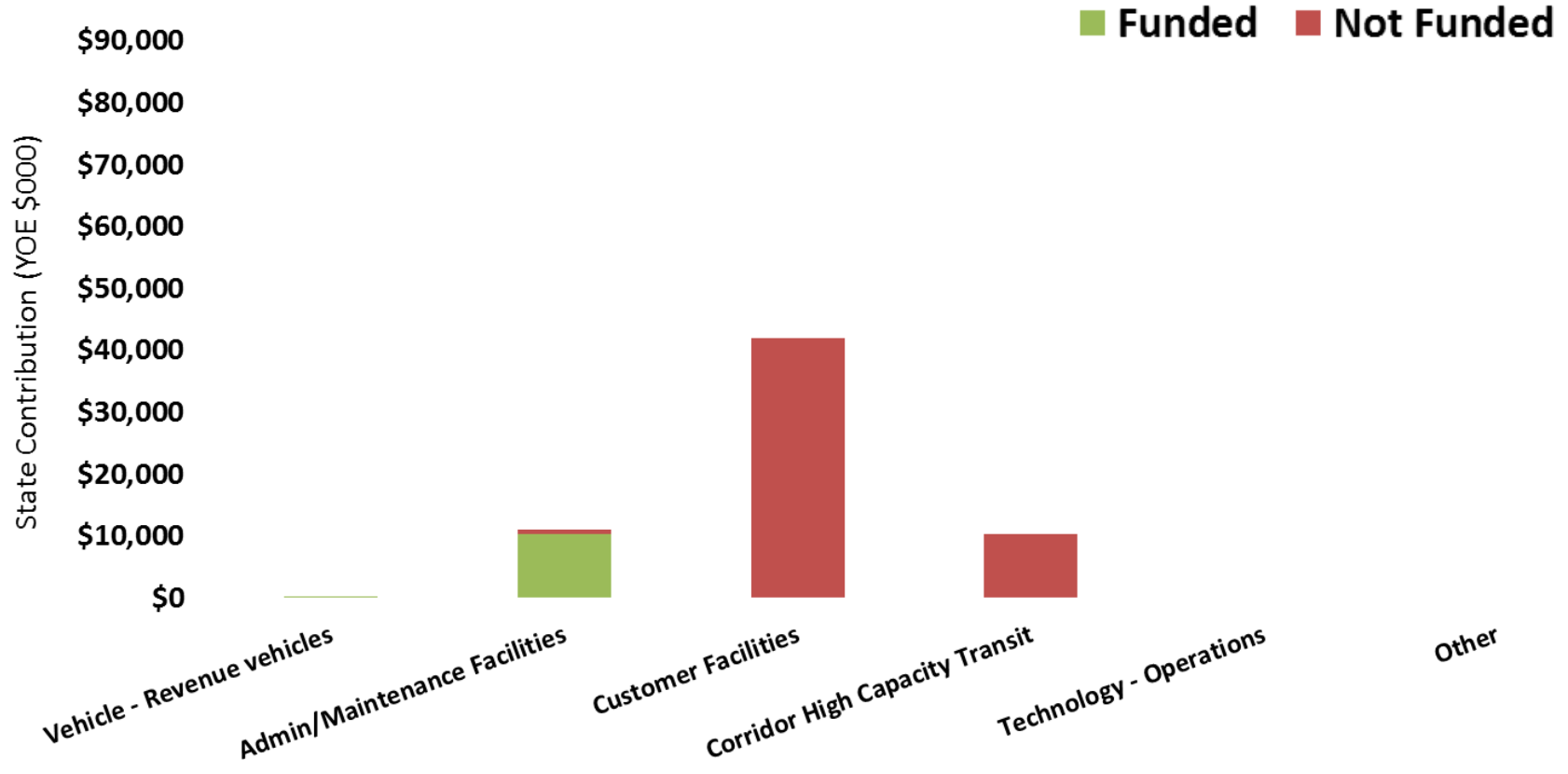
RANKING SUBTYPES TO SIMULATE FUNDING DECISIONS

- **Each project is attributed to one subtype**
- **Each subtype is attributed an average score**
- **Subtypes are ranked based on their score**
- **If revenue is available, subtypes are funded in order of their rank**
- **Outcome:**
 - Some subtypes are funded
 - Some subtypes are not funded
 - Some subtypes are partially funded

ILLUSTRATIVE: SUBTYPES FUNDED IN FY21 – SGR (YOE \$000)



ILLUSTRATIVE: SUBTYPES FUNDED IN FY21 – MAJOR EXPANSIONS (YOE \$000)



STATE MATCH OPTIONS

- Funding outcomes will show what projects are funded on an annual basis
- Projects funded in rank order by score, until funding exhausted by project type (SGR, Minor Enhancement, Major Expansion)
- More projects can be funded with lower state rates:
 - How many projects would receive funding as the state participation rate is reduced?
- Graphs show the range of project value funded for other match rates (between 50% and 80%)

SCENARIOS

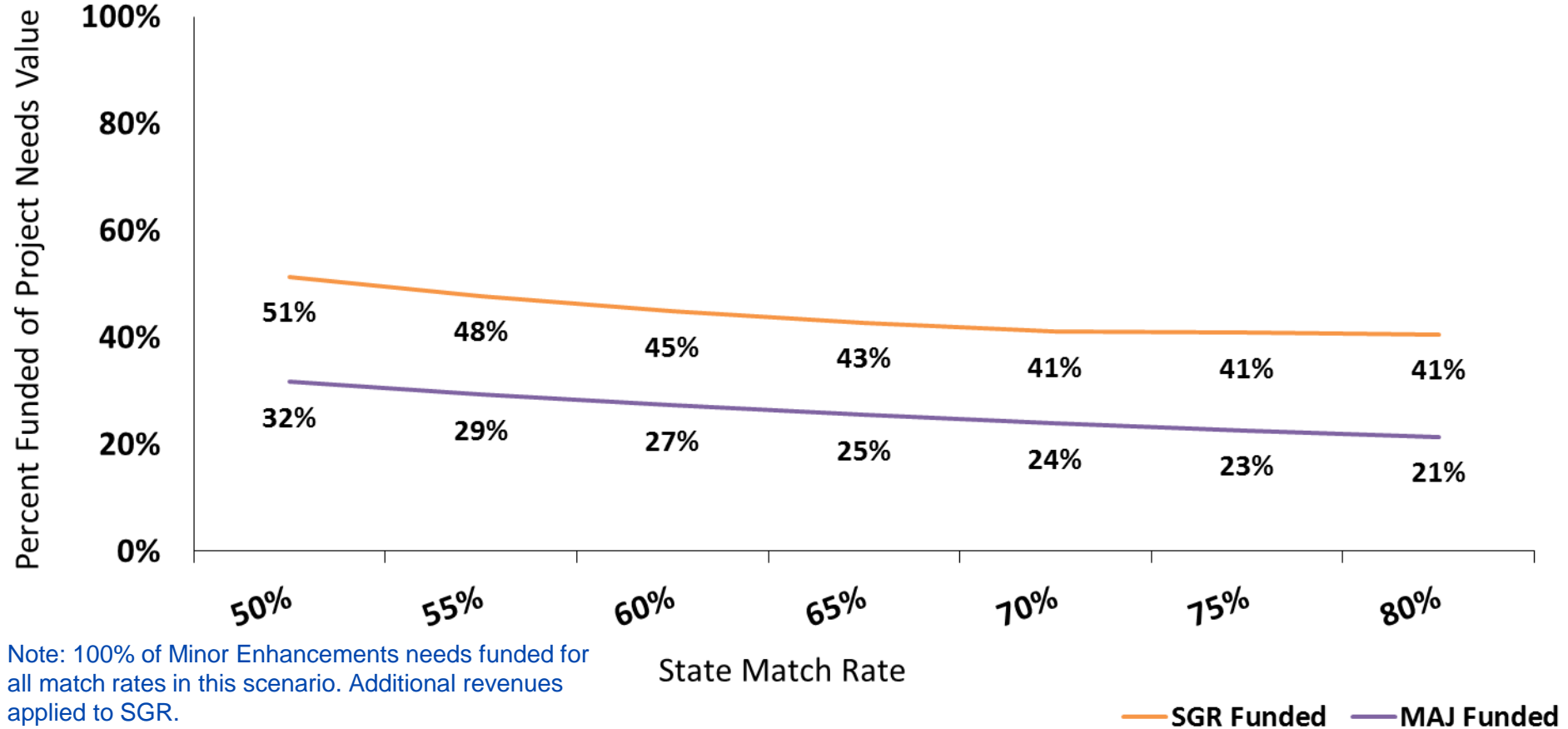
Scenario 1	Scenario 2	Scenario 3
80% SGR/Minor Enhancements 20% Major Expansions	90% SGR/Minor Enhancements 10% Major Expansions	100% SGR

State Share: Maximum 80% State Participation Rate on Total Cost of Project

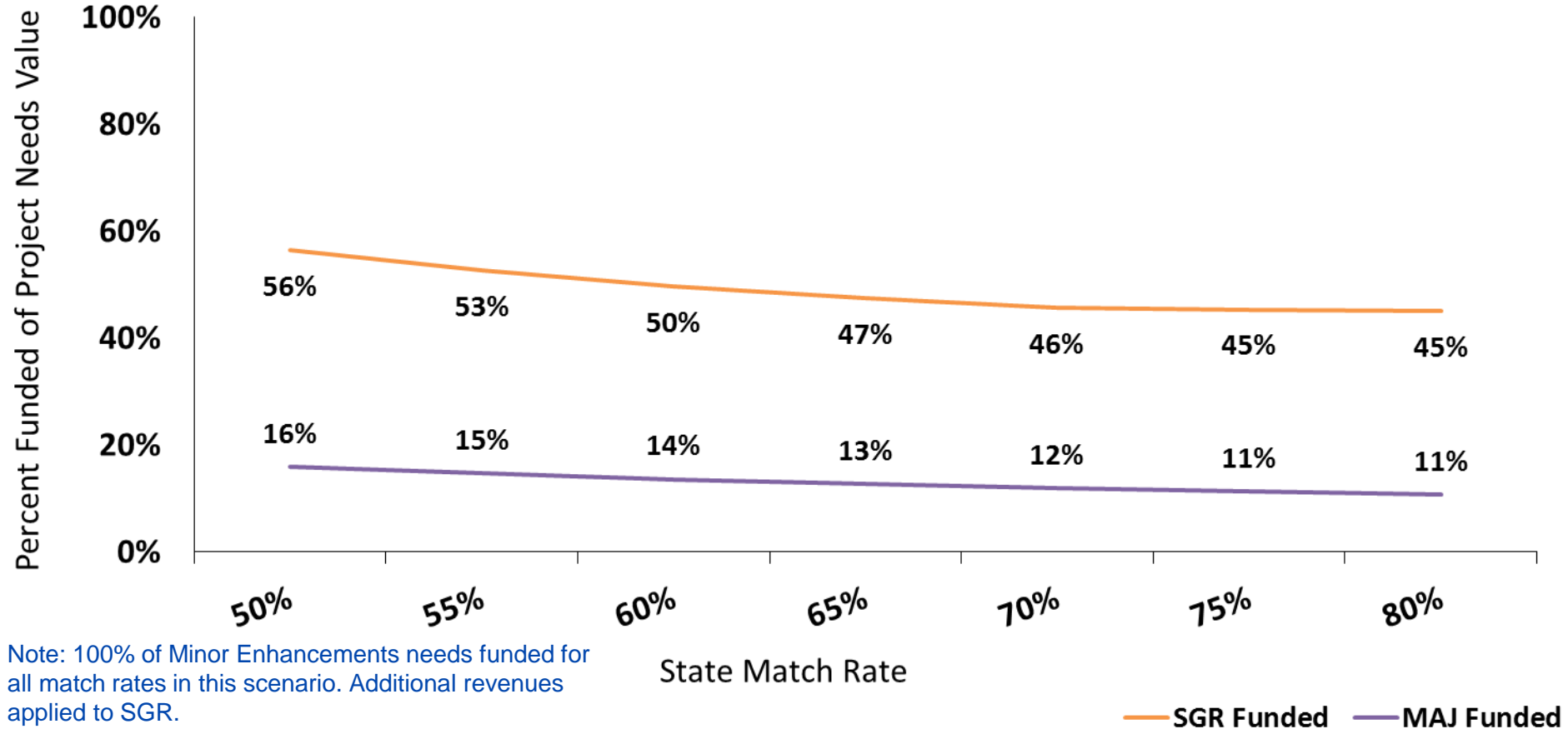
2 state revenue cases:

- Base Case: PRIIA and Transit Capital Bonds sunset as scheduled
- Additional Revenue: Sunset funds backfilled + 15% additional revenue (\$20m)

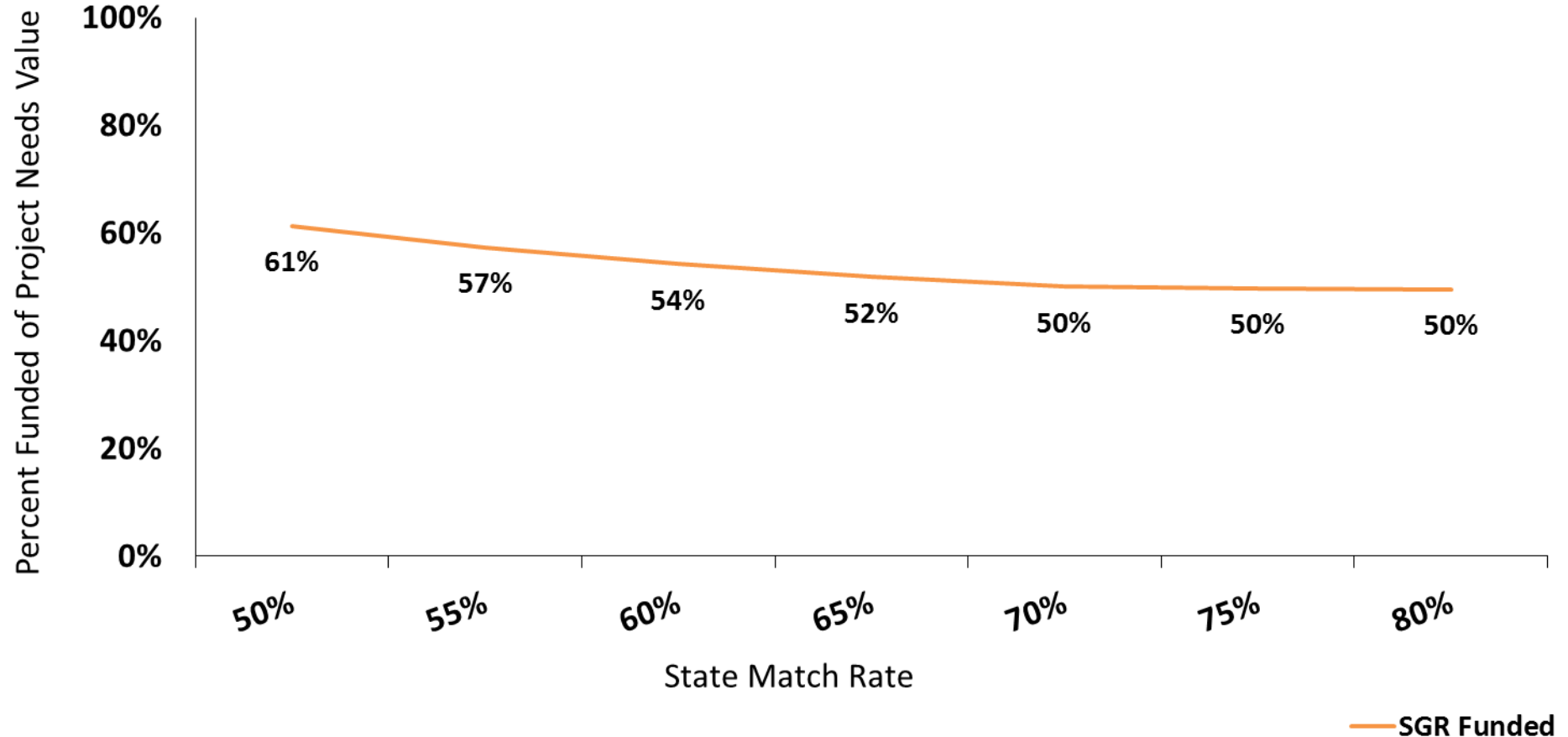
SCENARIO 1 – 80% SGR / 20% MAJOR – BASE REVENUE



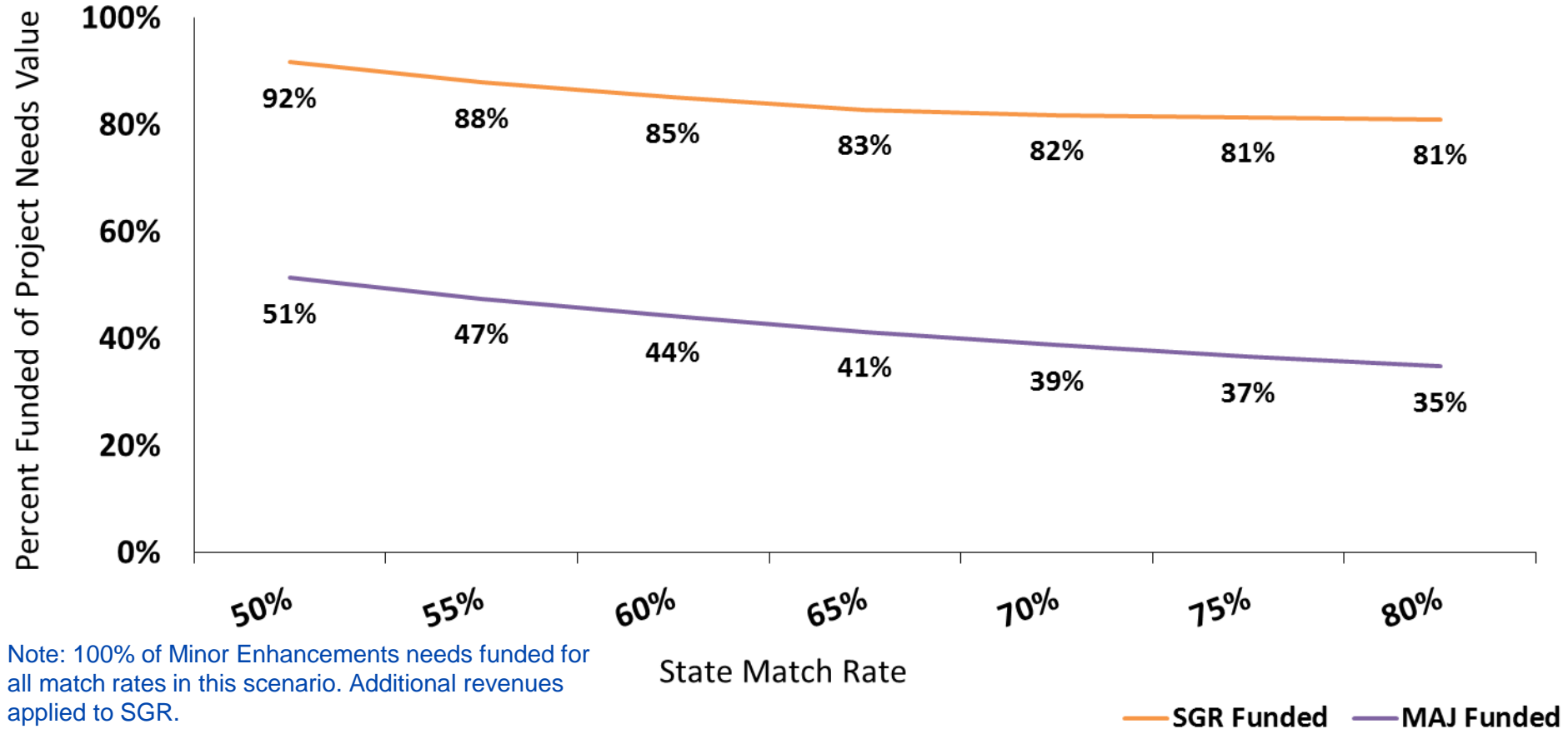
SCENARIO 2 – 90% SGR / 10% MAJOR – BASE REVENUE



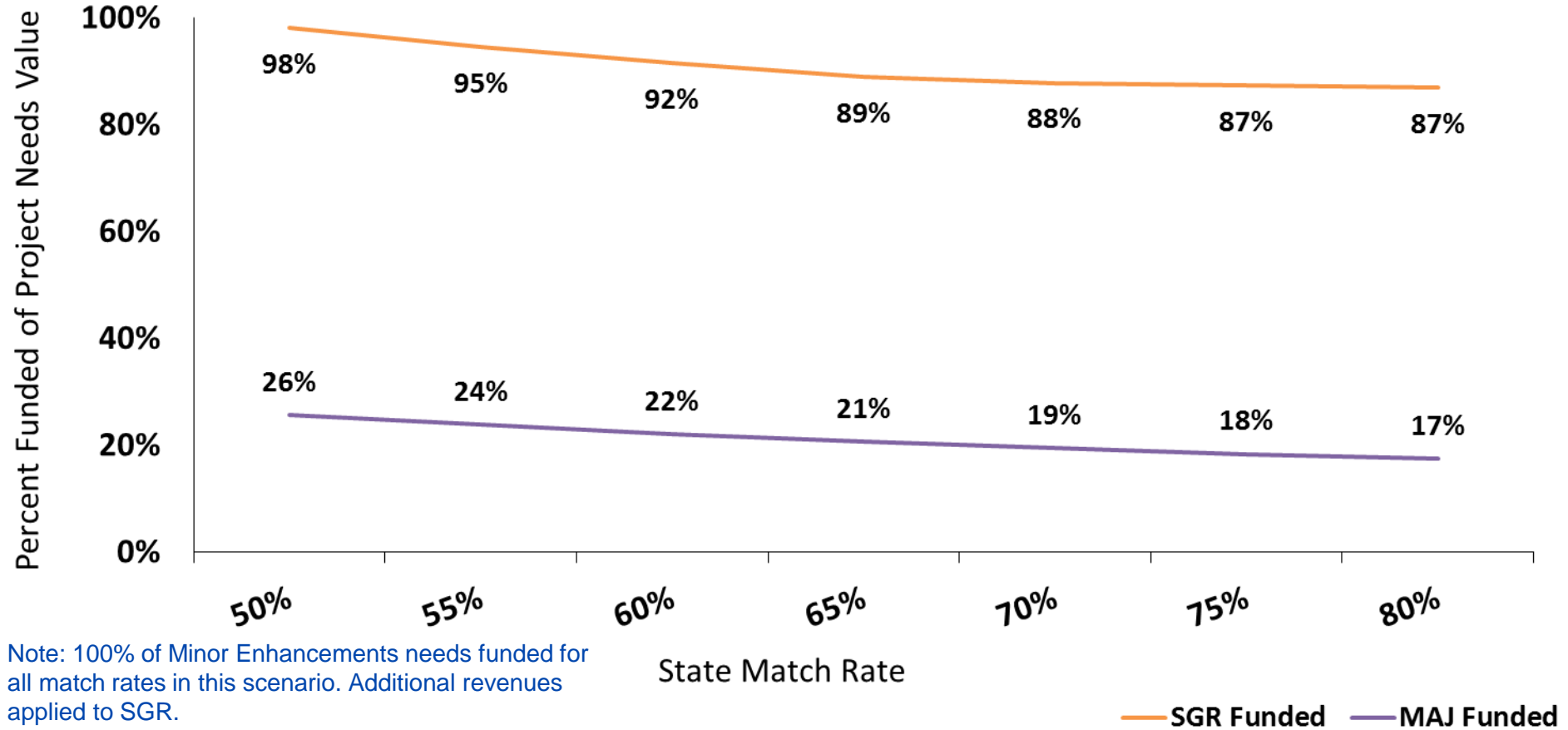
SCENARIO 3 – SGR ONLY – BASE REVENUE



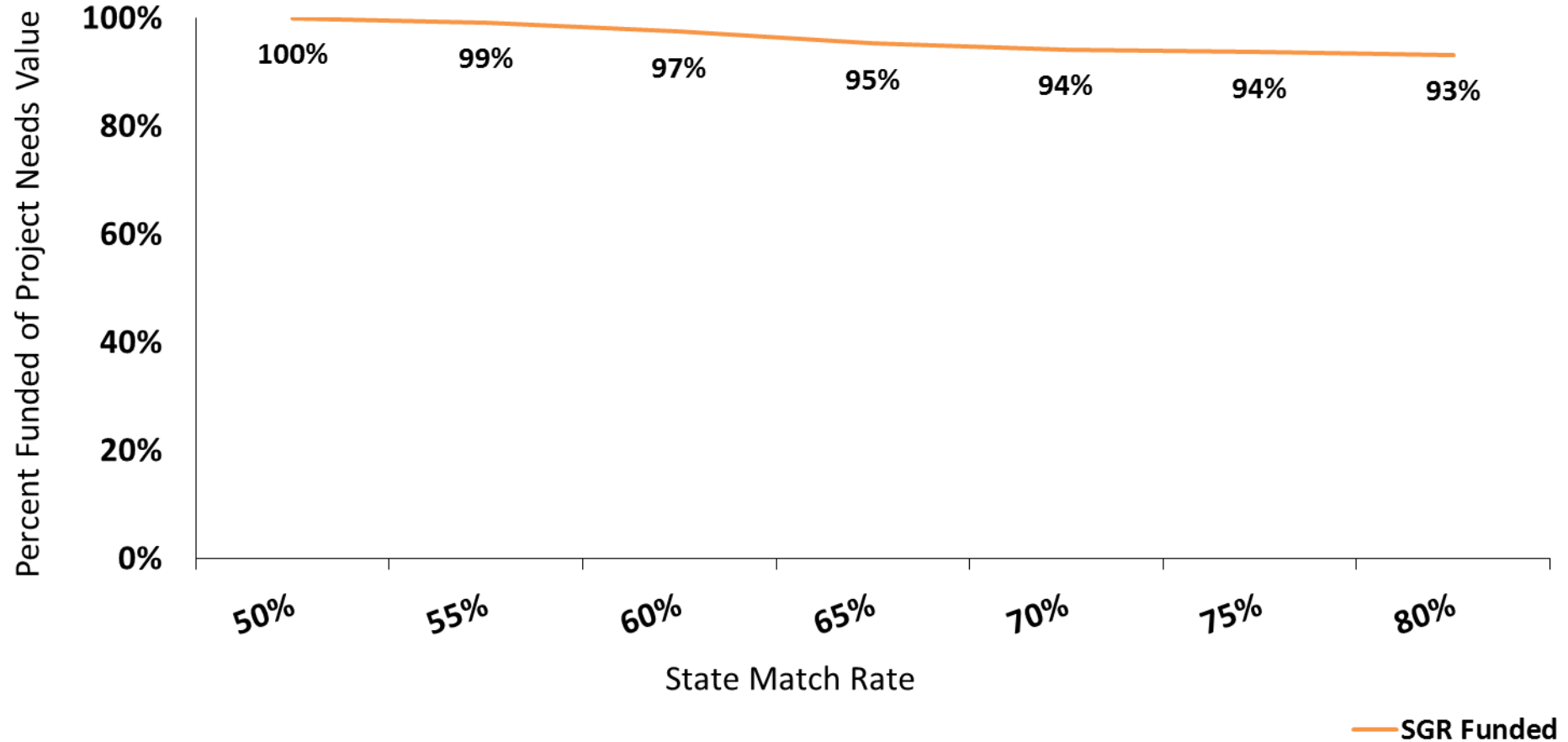
SCENARIO 1 – 80% SGR / 20% MAJOR – ADDITIONAL REVENUE



SCENARIO 2 – 90% SGR / 10% MAJOR – ADDITIONAL REVENUE



SCENARIO 3 – SGR ONLY – ADDITIONAL REVENUE



PRIORITIZED CAPITAL FUNDING ALLOCATION: FINDINGS

- **Analysis demonstrates that prioritizing capital project funding allocation leads to expected results**

- Higher scored project subtypes include:
 - SGR / Minor Enhancements:
 - Revenue Vehicles
 - Maintenance Facilities
 - Technology-Operations
 - Major Expansions:
 - Revenue Vehicles
 - Maintenance Facilities

- Project subtypes receiving the most funding include:
 - For SGR: Revenue Vehicles, Technology-Operations and Customer Facilities
 - For Major Expansions: Funding sufficient only for Revenue Vehicles in most years

NEXT STEPS

→ Key variables to consider:

- **Funding Split between State of Good Repair (SGR) and Major Expansion**
 - 80% SGR / 20% Expansion
 - 90% SGR / 10% Expansion
 - 100% SGR

- **State Participation Rate**

APPENDIX

ACRONYMS

- **CIP – Capital Improvement Plan**
- **FY – Fiscal Year**
- **PRIIA – Passenger Rail Investment Imp**
- **SGR – State of Good Repair**
- **SYIP – Six Year Improvement Plan**
- **WMATA – Washington Metropolitan Area Transit Authority**

REVENUE ESTIMATION METHODOLOGY

- Time Period: FY 2018 through FY 2027
- Unit: Year-of-Expenditure (YOE) dollars (inclusive of inflation)
- Data Sources:
 - Virginia Department of Taxation
 - Northern Virginia Transportation Authority
 - Hampton Roads Transportation Accountability Commission
 - Hampton Roads Transit
 - U.S. Census
 - U.S. Bureau of Labor Statistics
 - U.S. Energy Information Administration (EIA)
- Growth rates: Compound Annual Growth Rates (CAGRs) based on FY2018-2022 forecasts used to extend estimates through 2027
- Revenue Increases: 5-15% on existing rates, dedicated to transit capital

TRANSIT RESOURCE ALLOCATION PROJECTION DATA

→ **Simulation reuses assumptions and methods from Transit Resources Allocation Plan Capital Projection to the extent possible:**

- **WMATA Expenditures**

- FY18-22 based on WMATA FY17-22 CIP
- Projected expenditures FY23-27 based on average annual WMATA CIP costs

- **All Other Agencies' Expenditures**

- FY18-21 based on FY17 SYIP, due to drop in expenditures last years of SYIP
- Projected expenditures FY22-27 based on average annual SYIP costs FY18-21
- FY22-27 escalated by historical growth in RS Means Construction Cost Index

- **Federal Participation**

- FY18-21 based on FY2017 SYIP estimates by major agency/district by tier
- FY22-27 based on average of FY18-FY21